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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,747	06/20/2005	Hiroshi Yokota	050344	5871
23850 7590 05/29/2008 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005				
EXAMINER				
TURNER, SONJI LUCAS				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
05/29/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/539,747

**Applicant(s)**

YOKOTA ET AL.

**Examiner**

SONJI TURNER

**Art Unit**

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/ISD)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 6/20/2005

## **DETAILED ACTION**

### ***Specification***

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. However, the specification is replete with grammatical errors that include run-on sentences and improper punctuations, spelling errors (or typographical errors), and usage errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

### ***Claim Objections***

2. Claim 9 objected to because of the following informalities: the end of line 3 reads "accumulation" replace with -accumulation-. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Elonon '789 (US Patent 5,711,789).

Regarding claim 1, Elonon '789 teaches a gas-liquid separator for gas-liquid separation performed by centrifugal force of an impeller mounted on a shaft which rotates in a casing with a

discharge impeller part; a discharge outlet of the casing disposed in a position opposite the discharge impeller part; another axial end of the impeller; and exhaust outlet of the casing disposed in a position opposite the impeller part; a vacuum means connected to the exhaust outlet; and a suction inlet of the casing disposed in a position between the discharge outlet and the exhaust outlet (fig. 3; col. 6, lines 38-67; col. 7, lines 38-54; col. 8).

Regarding claim 2, Elonon '789 teaches a cleaning fluid inlet is provided near the shaft sealing of the casing where the rotating shaft penetrates (fig. 3; col. 7, lines 14-17).

Regarding claims 3 and 4, Elonon '789 teaches the inlet to the casing formed to a flow path inside the casing (fig. 3; col. 7, lines 55-60).

Regarding claims 5 and 6, Elonon '789 teaches a member which prevents the direct penetration of liquid near the rotating shaft (fig. 3; col. 8, lines 47-52).

Regarding claims 7 and 8, Elonon '789 teaches an impeller with at least one cylindrical member coaxially attached (fig. 3).

Regarding claims 9-11, Elonon '789 teaches at least one of fluid throttle means, heating means, and accumulation means in the passage of the suction inlet (fig. 3). An accumulation space is located upstream of the impeller.

Regarding claims 12-14, Elonon '789 teaches a cavitation causing means in the passage (fig. 3).

Regarding claims 15-17, Elonon '789 teaches protection means in the exhaust passage from the exhaust outlet to the vacuum means (col. 9, line 1-5).

Regarding claims 18-20, Elonon '789 teaches that at least a portion of the discharged fluid from the discharge outlet is returned to the suction inlet (fig. 3; col. 7, lines 14-17).

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and is listed on PTO-892 (Notice of References Cited). The references are considered to be of interest, as the references relate to the art of gas-liquid separation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonji Turner whose telephone number is 571-272-1203. The examiner can normally be reached on Monday - Friday, 10:00 am – 2:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Duane S. Smith/  
Supervisory Patent Examiner, Art Unit  
1797  
5-27-08

